

CLAIMS:

1. A dough dispensing apparatus comprising a container for receiving and holding dough and a dough transfer device for receiving dough from said container and for  
5 transferring said dough to a depositing station at which the dough is deposited onto a conveying means for further processing steps to be carried out on the dough.
2. A dough dispensing apparatus as claimed in Claim 1, wherein the apparatus  
10 includes a longitudinal framework along which the container and the dough transfer device are moveable.
3. A dough dispensing apparatus as claimed in Claim 2, wherein the dough is mixed  
and loaded into the container in a mixing room and the environment in the mixing room is  
controlled so that the temperature in the room is maintained at a constant temperature.  
15
4. A dough dispensing apparatus as claimed in Claim 3, wherein the temperature is  
maintained at approximately 20°C.
5. A dough dispensing apparatus as claimed in Claim 4, wherein, in use, the container,  
20 loaded with dough, can be moved from the mixing room to a cooking room where subsequent processing steps are carried out on the dough.
6. A dough dispensing apparatus as claimed in Claim 5, wherein separating means are  
provided for separating the mixing room from the cooking room, so that the controlled  
25 environment of the mixing room is kept intact.
7. A dough dispensing apparatus as claimed in Claim 6, wherein the separating means  
includes a slideable door which is slideably moveable between a closed position in which  
the slideable door is effective for separating the mixing room from the cooking room and  
30 an open position in which the container can be moved along the track from the mixing room to the cooking room.

8. A dough dispensing apparatus as claimed in Claim 1, wherein the dough dispensing apparatus includes elevating means for elevating the container into a raised position, in which raised position the container can be tilted so that dough held in the container can be poured downwardly into the dough transfer device.

5

9. A dough dispensing apparatus as claimed in Claim 8, wherein the elevating means for elevating the container includes an elevator device which is inclined at an angle to the vertical; the elevator device including means for gripping and holding the container as it is moved along the inclined axis of the elevator device and means for tipping the container over so that in use, the dough contained in the container flows downwardly into the dough transfer device.

10

10. A dough dispensing apparatus as claimed in Claim 9, wherein the elevator device is located in the cooking room and the container passes through the slideable door before being engaged with the elevator device.

15

11. A dough dispensing apparatus as claimed in Claim 1, wherein the dough transfer device comprises a shaped device such as substantially conical shaped device.

20

12. An apparatus as claimed in Claim 11, wherein the dough transfer device includes a metering valve operable between a closed position in which dough held in the transfer device is retained therein and an open position in which dough can flow out of the transfer device.

25

13. An apparatus as claimed in Claim 12, wherein the dough transfer device includes a scraper device which is fixedly attached to a holding member such that in use, when dough is contained in the transfer device, motion of the dough with respect to the baffle prevents dough from adhering to the inner side walls of the transfer device.

30

14. An apparatus as claimed in Claim 13, wherein the scraper device is generally arcuate in profile thereby enabling the dough to be dispensed homogenously from the bottom of the dough transfer device, as required when in use, while simultaneously not

adding significantly to the mixing of the dough in the dough transfer device, which would otherwise lead to over-mixing of the dough.

15. An apparatus as claimed in Claim 14, wherein the dough transfer device is rotatable  
5 about its longitudinal axis and in use, the transfer device is rotated about its longitudinal axis so as to result in motion of dough in the transfer device with respect to said scraper device.

16. An apparatus as claimed in Claim 1, wherein the depositing station includes a  
10 plurality of depositing locations; with the dough transfer device being moveable along a track on the framework so that the dough transfer device can be used to supply dough to each depositing location, as required.

17. An apparatus as claimed in Claim 16, wherein each depositing location includes a  
15 deposit hopper into which the dough is transferred from the dough transfer device, each deposit hopper including means for depositing dough onto a conveyor belt for transport downline in a production line for further processing steps to be carried out on the dough.

18. An apparatus as claimed in Claim 1, wherein the dough dispensing apparatus  
20 comprises a plurality of containers for receiving and holding dough and a corresponding plurality of dough transfer devices and depositing stations.

19. An apparatus as claimed in Claim 1, wherein the dough dispensing apparatus also  
includes a cleaning station for cleaning the dough transfer device, the cleaning station  
25 being adapted to receive the dough transfer device and including a nozzle for spraying a jet of cleaning fluid to clean the inside of the dough transfer device.

20. An apparatus as claimed in Claim 19, wherein the cleaning station includes a  
coverlid for the dough transfer device which is operable so that in use, when the dough  
30 transfer device is moved into an appropriate position at the cleaning station, the coverlid is secured onto the dough transfer device and cleaning fluid emerges under pressure from the spray nozzle so as to clean the dough transfer device.

21. An apparatus as claimed in Claim 20, wherein the cleaning station includes means for locating the coverlid onto the dough transfer and said locating means includes a pneumatic piston.

5

22. A system for dispensing dough, the system comprising a container for receiving and holding dough, a dough transfer device for receiving dough from said container and for transferring said dough to a depositing station at which the dough is deposited onto a conveying means for further processing steps to be carried out on the dough.

10

23. A system as claimed in Claim 22, wherein the container and the dough transfer device are moveable along a longitudinal framework.

24. A system as claimed in Claim 22, wherein the system includes means for mixing dough during a dough mixing and preparation process and means for loading dough into the container.

25. A system as claimed in Claim 22, wherein the mixing of the dough is carried out in a mixing room and the environment in the mixing room is controlled so that the temperature in the room is maintained at a constant temperature.

26. A system as claimed in Claim 25, wherein in the mixing room, water is added to the dough ingredient(s) in a hydration step in the dough mixing and preparation process.

27. A system as claimed in Claim 26, wherein the dough mixing and preparation process includes a further step of allowing the mixed dough to rest for a specified pre-determined length of time to enable further hydration of ingredients to occur.

28. A system as claimed in Claim 27, wherein the pre-determined rest period is 5 to 10 minutes in duration.

30

29. A system as claimed in Claim 22, wherein the system includes means for moving the container, loaded with dough, from the mixing room to a cooking room where subsequent processing steps are carried out on the dough.

5 30. A system as claimed in Claim 22, wherein the system includes separating means for separating the mixing room from the cooking room so that the controlled environment of the mixing room is kept intact.

31. A system as claimed in Claim 30, wherein the separating means includes a  
10 slideable door which is slideably moveable between a closed position in which the slideable door is effective for separating the mixing room from the cooking room and an open position in which the container can be moved along the track from the mixing room to the cooking room.

15 32. A system as claimed in Claim 22, wherein the system includes elevating means for elevating the container into a raised position, in which raised position the container can be tilted so that dough held in the container can be poured downwardly into the dough transfer device.

20 33. A system as claimed in Claim 22, wherein the elevating means for elevating the container includes an elevator device which is inclined at an angle to the vertical; the elevator device including means for gripping and holding the container as it is moved along the inclined axis of the elevator device and means for tipping the container over so that in use, the dough held in the container can flow downwardly into the dough transfer  
25 device.

34. A system as claimed in Claim 33, wherein the elevator device is located in the cooking room and the container passes through the slideable door before being engaged with the elevator device.

30 35. A system as claimed in Claim 22, wherein the system includes a scraper device which is preferably fixedly attached to an inner side wall of the transfer device such that in

use, when dough is contained in the transfer device, motion of the dough with respect to the baffle prevents dough from adhering to the inner side walls of the transfer device.

36. A system as claimed in Claim 35, wherein the scraper device is generally arcuate in profile thereby enabling the dough to be dispensed homogenously, from the bottom of the dough transfer device, as required when in use, while simultaneously not adding significantly to the mixing of the dough in the dough transfer device, which would otherwise lead to over-mixing of the dough.

37. A system as claimed in Claim 22, wherein the dough transfer device is rotatable about its longitudinal axis and in use, the transfer device is rotated about its longitudinal axis so as to result in motion of dough in the transfer device with respect to said scraper device.

38. A system as claimed in Claim 22, wherein the system for dispensing dough also includes a cleaning station for cleaning the dough transfer device, the cleaning station being adapted to receive the dough transfer device and including a nozzle for spraying a jet of cleaning fluid to clean the inside of the dough transfer device.

39. A system as claimed in Claim 38, wherein the cleaning station includes a coverlid for the dough transfer device which is operable so that in use, when the dough transfer device is moved into an appropriate position at the cleaning station, the coverlid is secured onto the dough transfer device and cleaning fluid emerges under pressure from the spray nozzle so as to clean the dough transfer device.

25

40. A system as claimed in Claim 39, wherein the cleaning station includes means for locating the coverlid onto the dough transfer device and preferably said means includes a pneumatic piston.

41. A process for preparing dough in advance of subsequent cooking, the process including the steps of: -

30

- (d) mixing dough ingredient(s) in pre-determined appropriate amounts;
- (e) adding water to the ingredient(s) to hydrate the ingredient(s); and
- (f) allowing the resulting mixture to rest for a pre-determined period of time at a pre-determined controlled temperature so as to allow time for the degree of hydration to increase.

5

42. A process as claimed in Claim 41, wherein the pre-determined period of time is 5 to 10 minutes.